

LRN HYDROPOWER O&M MAINTENANCE UPDATE

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13 April 2023



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LAUREL OCB TO SF6 GAS REPLACEMENT

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Scope

- Removal of three 161kV, 1200A oil-filled circuit breakers in the switchyard, including control cables and control cabinet.
- Removal of oil system used for oil circuit breakers to the point of nearest isolation (oil header)
- Installation of three new SF6 circuit breakers to include new control cabinet, control cables, and annunciation.

Total Project Budget

– \$2.97 Million

Progress

- Award Date – Base and option awarded on 09 Sept. 22 to Gardner Zemke Co. at \$1.88M
- Current status: Fabrication of SF6 circuit breakers
- Mobilization - Oct 23; Closeout – Apr 24



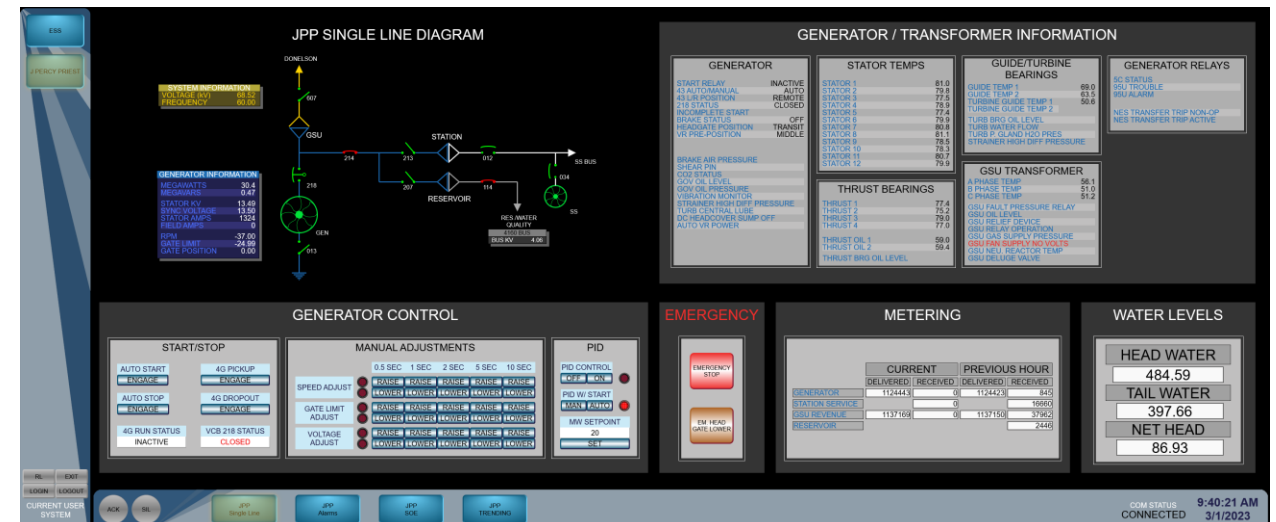
LRN SCADA REPLACEMENT

SCOPE

The Five remotely-operated hydroelectric power plants in the U.S. Army Corps of Engineers Nashville District (LRN) have supervisory, control, and data acquisition (SCADA) systems that are near end-of-life. Technical support for firmware, replacement hardware, and modern software are no longer available. The objective of this work is to replace the existing SCADA system, convert all the master plants to remote ready, remote the existing master plants and initially set up two centralized control centers, one at Old Hickory and the other at Cordell Hull with future plans to consolidate to one location strategically located within the Nashville District.

PROGRESS

Installation complete at J. P. Priest
Install and dry testing 3/6-3/10
Live testing March 3/13-3/13
Returned Unit to service 3/13





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BARKLEY INTAKE/SPILLWAY CRANE

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Scope

- To replace the existing Intake/Spillway Gantry Crane and rails with a new 165 Ton Gantry Crane to operate the intake and the spillway.

Total Project Cost

- \$15.5 Million
 - \$7.95 Million originally funded through Funding Pots.
 - \$7.5 Million additional funds through for award mods.
 - Plus an additional \$700K O&M Funds used for design.

Progress

- Contract awarded along with options.
- Portions of design being finalized by contractor.
- Fabrication is ongoing. Completion scheduled for November 2023.





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BIPARTISAN INFRASTRUCTURE LAW HYDRO

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Bipartisan Infrastructure Law

- Wolf Creek - Centralized Control (SCADA) - \$2.8M
- Old Hickory - Centralized Control (SCADA) - \$2.2M
- Cordell Hull - Centralized Control (SCADA) - \$1.7M
- Barkley - Replace Storm Damaged Powerhouse Generator Roof System - \$940K

FY22 & FY23 BIL & DRSAA PROJECTS - JOINT

FY22 BIL (Bipartisan Infrastructure Law):

- J. Percy Priest - Spillway Gate Chains - \$1.2M
- Wolf Creek - Replace Protective Coating of Bridge Section - \$650K
- Wolf Creek - Replace Concrete Deck of Bridge and Dam Section - \$2M
- Barkley - Rehabilitate Spillway Gates Mechanical and Electrical - \$5.6M
- Dale Hollow - Repair Spillway Bridge Deck - \$615K

FY23 BIL (Bipartisan Infrastructure Law):

- Dale Hollow - Provide Protective Coating to Spillway Gates - \$9.3M
- Dale Hollow - Replace Spillway Gate Machinery and Controls - \$4.2M
- Laurel - Replace Security System - \$750K
- Wolf Creek - Purchase of Debris Removal System (Phase 1) - \$1.25M
- Cordell Hull – Dam Embankment Instrumentation Monitoring System - \$450K

FY22 DRSAA (Disaster Relief Supplemental Appropriations Act):

- Wolf Creek - Spillway Gates and Machinery Replacement - \$202M
- Center Hill - Spillway Gates and Machinery Replacement - \$172.6M



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FY23 PRESIDENT'S BUDGET - HYDROPOWER

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Barkley:

- Arc Flash High Voltage Switchyard Power Transfer Switch Replacement - \$998K
- Hydropower Forebay Debris Removal - \$250K – Work Complete

Old Hickory:

- Arc Flash Right Bank Switchgear Replacement - \$1.3M
- Hydropower Forebay Debris Removal - \$225K – Work Complete

Cheatham:

- Hydropower Forebay Debris Removal - \$250K

Cordell Hull:

- Hydropower Forebay Debris Removal - \$225K – Work Complete
- FY 23 Work Plan: Replace Thrust Runner – \$550K



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FY23 PRESIDENT'S BUDGET - JOINT

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Old Hickory:

- Replace Intake/Spillway Crane - \$16.87M Phase 1

Wolf Creek:

- Purchase of Debris Removal System (Part 1) - \$650K
- Purchase of Debris Removal System (Part 2) - \$600K
- Dam Water Control Manual Update - \$115K



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FY24 PRESIDENT'S BUDGET - HYDROPOWER

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Barkley :

- Forebay Debris Removal

Cheatham

- Forebay Debris Removal

Cordell Hull

- Forebay Debris Removal

Old Hickory

- Forebay Debris Removal



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FY24 PRESIDENT'S BUDGET - JOINT

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Barkley :

- Phase 1 Spillway Gate Chain Replacement

Cheatham

- Spillway Gate Electrical Component Replacement

Cordell Hull

- Phase 1 Replace Spillway Gate Chains
- Spillway Gate Metal Repair and Protective Coating

Dale Hollow

- Investigate Downstream Slope Stabilization

Wolf Creek:

- Drain Hole Cleanout